

Presenting the only internationally approved and recognized system for orderly bacterial nomenclature...

# INTERNATIONAL CODE OF NOMENCLATURE OF BACTERIA

*Bacteriological Code, 1990 Revision*

Editors: S. P. Lapage, P. H. A. Sneath, E. F. Lessel, V. B. D. Skerman, H. P. R. Seeliger, and W. A. Clark; Editor for the 1992 Edition, P. H. A. Sneath

**P**ublished in 1992 by ASM for the International Union of Microbiological Societies (IUMS), the *Bacteriological Code, 1990 Revision*, is the only internationally recognized and approved reference book covering the rules and procedures for correct bacterial nomenclature. This new edition substantially updates the previous *Code*, published in 1975, by incorporating all subsequent additions and modifications which have occurred from 1976 through September 1990. Underlying this effort is the belief that progress in bacteriology is furthered by a precise and internationally recognized system of nomenclature.

The contents of this clear, concise volume are organized into several main sections: **General Considerations, Principles, Rules of Nomenclature with Recommendations, Advisory Notes, and Appendices.** Statutes of the International Committee on Systematic Bacteriology and of the Bacteriology and Applied Microbiology Division of IUMS, setting forth their mission and authority, are also summarized. Several useful indexes add to the excellent organization and accessibility of the work. Understanding of the complexities of the *Code* is further aided by two features: all nomenclatural terms are defined clearly when first used, and, wherever possible, actual examples from bacteriology have been included to illustrate rules.

Of interest to bacteriologists in general, microbiologists working in systematics, some biochemists and

molecular biologists, and taxonomists in particular, this reference is the best available resource for the scientist seeking to assess the correctness of names applied to defined bacterial taxa or to create and propose new names for formal approval. Here also is a summary of the history of the *Code* and lists of conserved and rejected names.

Together with the *Approved Lists of Bacterial Names* and *Index of the Bacterial and Yeast Nomenclatural Changes*, this reference is indispensable to bacterial systematists, who have all the essential nomenclatural information on bacteria in up-to-date form in these slim volumes.

February 1992. Hardcover (ISBN 1-55581-039-X), 232 pages, indexes.

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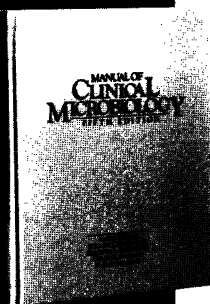
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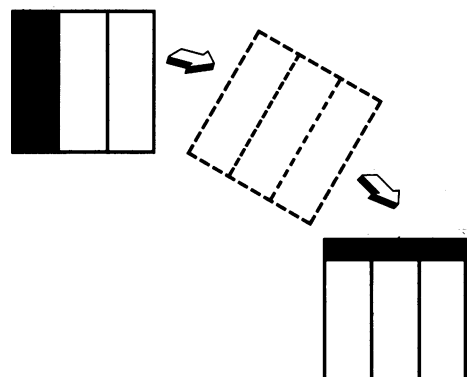
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*A fascinating look at the variety of multicellular interactions of microbes...*

# Microbial Cell-Cell Interactions



Edited by **Martin Dworkin**, *University of Minnesota, Minneapolis*

**T**his well-considered compilation of reviews and discussions has as one central theme that the historical concept of microbes as essentially unicellular organisms existing independently of other organisms is conceptually incomplete and misleading; instead, microbial systems manifest a variety of cell-cell interactions and a real understanding, not only of the role of the microbe in nature but also of the nature of the microbe itself, requires that researchers begin to think of microbes as interacting biochemically, genetically, and physiologically with each other. Thus considered, it becomes apparent that the variety of cell-cell interactions manifested by microbial systems represent excellent model systems for examining the mechanistic bases of the cell-cell interactions themselves, with application to the study of multicellular interactions in higher organisms.

The authors provide a representative sampling of the types of interactions among microbes, including mating interactions, involving the exchange of genetic information and including studies of exchanges of mating signals preceding mating; developmental interactions, with a close look at myxobacteria and cellular slime molds; ecological/colonization interactions, represented by discussions of coaggregation, especially in the oral ecosystem, and of bacterial luminescence in fish; and predator-prey interactions, including a look at the mechanisms involved in the *Bdellovibrio* developmental cycle that ultimately kills the host cell.

This book is directed toward any microbiologist, and the list is a long one, who must deal in a practical sense or in a research context with cell-cell interactions, as exemplified by examinations of mechanisms of pathogenesis, ecological interactions, mechanisms of mating, developmental biology, predator-prey interactions, plant-microbe interactions, and formation of mixed culture communities.

## CONTENTS

1. **Introduction** (*Dworkin*)
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3. **Conjugation among Enteric Bacteria** (*Ippen-Ihler and Maneewannakul*)
4. ***Chlamydomonas* Mating Interactions** (*Goodenough*)
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# Immunochemical Assays and Biosensor Technology for the 1990s

Edited by **Robert M. Nakamura**, *Scripps Clinic and Research Foundation and University of California, San Diego, School of Medicine, La Jolla*; **Yasushi Kasahara**, *Fujirebio, Inc., Tokyo, Japan*; and **Garry A. Rechnitz**, *University of Hawaii, Honolulu*

Immunochemical assays, fundamental measurement methods in biomedical research and analysis, have recently undergone revolutionary change and development deriving from innovations in the use of nonisotopic labels and in the marriage of biochemistry with electronics. By combining biochemical molecular recognition schemes with suitable transducers to achieve signal tests, researchers have developed more rapid, accurate, and efficient tests for the presence or concentration of desired analytes in biological specimens. Moreover, other assays in the developmental phase hold even greater promise for improved testing efficiency and for decentralization of these complex and sensitive laboratory procedures.

This volume summarizes the principles and applications of fundamental immunochemical assays, various assay formats, and the current state of the art in ultrasensitive and nonisotopic assays. It is intended primarily for anyone working with immunochemical assays who wants a comprehensive view of options now available as well as a glimpse at likely improvements which will occur in this decade. Students and practitioners of modern analytical techniques in immunology, clinical chemistry, diagnostic microbiology, serology, and medical technology will especially benefit.

## CONTENTS

**I. Concepts of Immunochemical Assays:** 1. General Principles of Immunoassays (*Nakamura*); 2. Overview of Nonisotopic Immunoassay Labels (*Howanitz*); 3. Advantages and Disadvantages of Different Labels in Immunoassays (*Kricka*); 4. Advances in Design, Generation, and Manipulation of Monoclonal Antibodies (*McCormack et al.*); 5. Evaluation and Clinical Validation of Immunoassays (*Feldkamp*)

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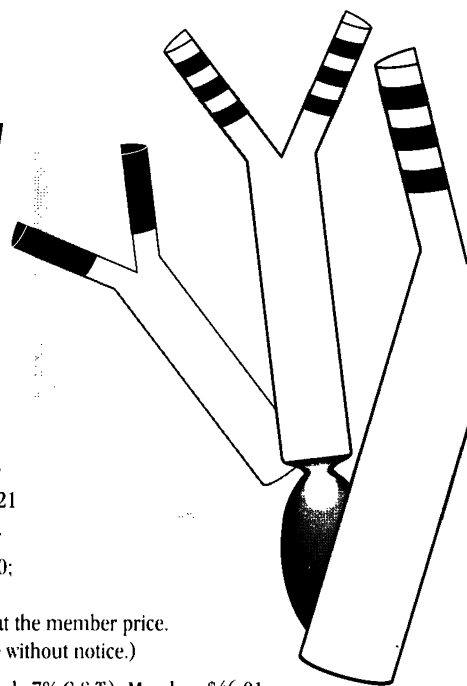
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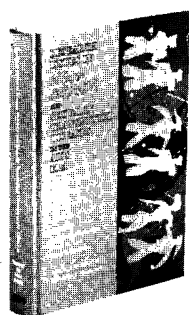
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# RESEARCH ISSUES IN HUMAN BEHAVIOR AND SEXUALLY TRANSMITTED DISEASES IN THE AIDS ERA



Edited by **Judith N. Wasserheit**, *National Institute for Allergy and Infectious Diseases, Bethesda, Maryland*; **Sevgi O. Aral**, *Centers for Disease Control, Atlanta, Georgia*; and **King K. Holmes**, *University of Washington Center for AIDS and STDs, Seattle*; Associate editor, **Penelope J. Hitchcock**, *National Institute for Allergy and Infectious Diseases, Bethesda, Maryland*

This fascinating monograph is a collaborative effort by an interdisciplinary group of experts in behavioral sciences, sexually transmitted diseases (STDs), epidemiology, biostatistics, clinical trials, and health education from throughout the world, brought together under the auspices of the National Institute of Allergy and Infectious Diseases. Their common goal was to define a revolutionary new agenda for intervention-oriented behavioral research into the prevention and control of STDs, including HIV infection. Their strong belief is that exciting new advances can be made in the field of STD research when the entire constellation of factors determining the incidence and natural history of these diseases is addressed, including the biological characteristics of the host, the biochemical and physical properties of the causative agent or pathogen, and the broad range of human behaviors that come into play.

The contributors have successfully bridged the languages and paradigms of disparate research fields to achieve the interdisciplinary communication necessary to promote collaboration among workers in the clinical and social sciences. Some chapters focus on providing behavioral scientists with background information on biological aspects of these diseases; in others, biomedical investigators are introduced to the theoretical frameworks that are relevant in designing behavioral interventions. A glossary further facilitates reading by scientists from a diverse range of disciplines.

This monograph was written to assist other biomedical and behavioral scientists in both industrialized and developing countries in addressing STD research through interdisciplinary approaches. It is intended not only for established investigators but for students of a wide range of clinical and social sciences.

Melding biomedical and behavioral sciences in a revolutionary model for research into the prevention and control of sexually transmitted diseases

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Behavioral Risk Factors for Sexually Transmitted Diseases Including HIV Infection (6 chapters by *Padian et al.*, *Ehrhardt and Wasserheit*, *Carballo et al.*, *Amaro and Gornemann*, *Aral et al.*, and *Jaccard and Wilson*)

Approaches to Changing Human Behaviors: Implications for Design of Interventions for Control of Sexually Transmitted Diseases Including HIV Infection (4 chapters by *Hornik*, *Smith*, *Fishbein et al.*, and *Newman et al.*)

Behavioral Interventions for Prevention and Control of Sexually Transmitted Diseases Including HIV Infection (5 chapters by *Hook*, *Piot and Laga*, *Judson and Paalman*, *Holmes and Aral*, and *Green and Washington*)

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